ABSTRACT OF THE DISCLOSURE

A method of fabricating a ridge-waveguide type semiconductor laser device having a large half-value width and a high kink level is provided. First, an effective refractive index difference Δn between an effective refractive index n_{eff1} of the ridge and an effective refractive index n_{eff2} of a portion on each of both sides of the ridge is taken as $\Delta n = n_{eff1} - n_{eff2}$, and a ridge width is taken as W. On such an assumption, constants "a", "b", "c", and "d" of the following three equations are set on X-Y coordinates (X-axis: W, Y-axis: Δn). The first equation is expressed by $\Delta n \leqq a \times W + b$, where "a" and "b" are constants determining a kink level. The second equation is expressed by $W \geqq c$, where "c" is a constant specifying a minimum ridge width at the time of formation of the ridge. The third equation is expressed by $\Delta n \geqq d$, where "d" is a constant specified by a desired half-width value θ_{para}. Then at least either of a kind and a thickness of an insulating film, a thickness of an electrode film on the insulating film, and a kind and a thickness of a portion, located on each of both the sides of the ridge, of the upper cladding layer is set in such a manner that a combination of Δn and W satisfies the above three equations.

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